

Supplementary Table S1. Missing Data: Covariates used in analysis of respiratory outcomes.

n	CO2	PM25	Endotoxin	Age	Surface area mold	Born premature
81						
7			X			
6		X				
1	X	X				
1	X		X			
1	X					
1						X

X indicates that the listed covariate is missing. n represents the sample size. The row with no X's indicates complete data. Each of the remaining rows represents individuals with the same pattern of missingness.

Supplementary Table S2. Multivariable modelling for LRTI (multiple imputation data set, n=98, with 86 LRTI visits).

Covariate	Unadjusted Rate Ratio (95% CI)	p-value	Adjusted Rate Ratio (95% CI)	p value
Age (years)	0.65 (95% CI 0.48 - 0.894)	0.01	0.67 (95% CI 0.48 - 0.92)	0.02
Born premature (yes/no)	1.41 (95% CI 0.70 - 2.86)	0.33	1.38 (95% CI 0.72 - 2.63)	0.33
PM2.5 ($\mu\text{g}/\text{m}^3$)	1.00 (95% CI 0.99 - 1.00)	0.73	1.00 (95% CI 0.99 - 1.003)	0.38
Surface area of mold > 0.2 m ² (yes/no)	0.32 (95% CI 0.11 - 0.93)	0.04	0.45 (95% CI 0.16 - 1.23)	0.12
Log endotoxin (eu/m ²)	1.12 (95% CI 0.98 - 1.29)	0.10	1.13 (95% CI 1.00 - 1.29)	0.06
CO ₂ (3-knot restricted cubic spline*) (ppm)		0.07		0.45
1st coefficient	1.002 (95% CI 1.000 - 1.004)		1.001 (95% CI 0.999 - 1.003)	
2nd coefficient	0.996 (95% CI 0.993 - 0.999)		0.998 (95% CI 0.995 - 1.001)	

Rate ratios represent estimated ratio of events/year of life between groups. Rate ratios are per unit increase for continuous variables or for the described group (e.g. surface area >0.2 m² or born premature) compared to the referent. An adjusted rate ratio >1 indicates the covariate is associated with increased event rates.

*Knots for CO₂: 600.1, 1054.2, 1865.1

Supplementary Table S3. Multivariable modelling for URTI (multiple imputation data set, n=98, with 213 URTI visits).

Covariate	Unadjusted Rate Ratio (95% CI)	p-value	Adjusted Rate ratio (95% CI)	p value
Age (years)	0.83 (95% CI 0.68 - 1.02)	0.07	0.83 (95% CI 0.68 - 1.02)	0.07
Born premature (yes/no)	0.89 (95% CI 0.55 - 1.44)	0.63	0.83 (95% CI 0.52 - 1.33)	0.43
PM2.5 (µg/m ³)	1.00 (95% CI 1.00 - 1.00)	0.59	1.00 (95% CI 1.00 - 1.00)	0.93
Surface area of mold > 0.2 m ² (yes/no)	1.60 (95% CI 0.97 - 2.63)	0.06	1.57 (95% CI 0.97 - 2.55)	0.07
CO ₂ (ppm)	1.0000 (95% CI 0.9996 - 1.0004)	0.92	1.000 (95% CI 0.9996 - 1.0003)	0.76
Log endotoxin (3-knot restricted cubic spline*) (eu/m ²)		0.18		0.29
1st coefficient	1.27 (95% CI 0.98 - 1.64)		1.23 (95% CI 0.94 - 1.60)	
2nd coefficient	0.74 (95% CI 0.54 - 1.03)		0.78 95% CI 0.56 - 1.08)	

Rate ratios represent estimated ratio of events/year of life between groups. Rate ratios are per unit increase for continuous variables or for the described group (e.g. surface area >0.2 m² or born premature) compared to the referent. An adjusted rate ratio >1 indicates the covariate is associated with increased event rates.

*Knots for log endotoxin: 7.22, 10.48, 14.71

Supplementary S4. Multivariable modelling for wheeze with cold (multiple imputation data set, n=98, with 38 participants reporting wheeze with colds).

Covariate	Unadjusted Odds Ratio (95% CI)	p-value	Adjusted Odds Ratio (95% CI)	p value
Age (years)	1.64 (95% CI 1.05 - 2.56)	0.03	1.58 (95% CI 0.99 - 2.53)	0.06
Born premature (yes/no)	0.87 (95% CI 0.30 - 2.48)	0.79	0.75 (95% CI 0.24 - 2.33)	0.62
PM 2.5 ($\mu\text{g}/\text{m}^3$)	1.00 (95% CI - 1.00)	0.35	1.00 (95% CI 0.99 - 1.00)	0.45
Surface area of mold > 0.2 m ² (yes/no)	1.47 (95% CI 0.48 - 4.51)	0.50	1.38 (95% CI 0.42 - 4.57)	0.59
CO ₂ (ppm)	1.000 (95% CI 0.999 - 1.001)	0.97	1.000 (95% CI 0.999 - 1.001)	0.95
Log endotoxin (eu/m ²)	1.21 (95% CI 0.97 - 1.49)	0.09	1.20 (95% CI 0.96 - 1.49)	0.10

Odds ratios are per unit increase for continuous variables or for the described group (e.g. surface area >0.2m² or born premature) compared to the referent.